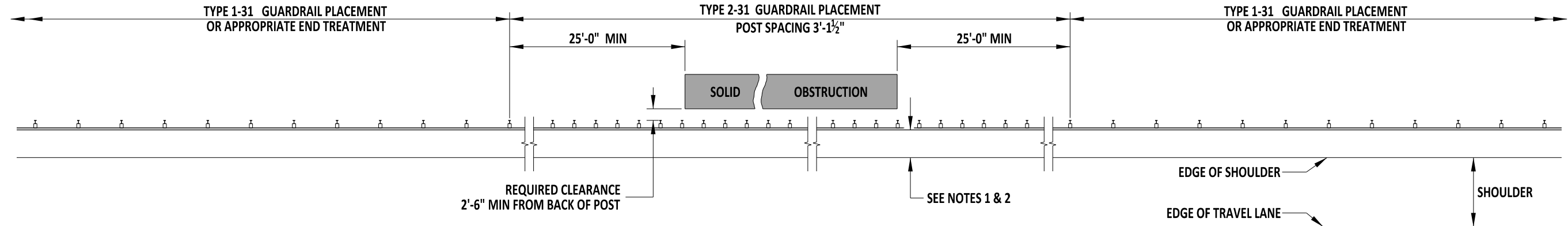
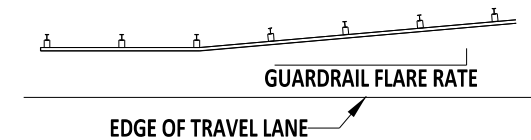


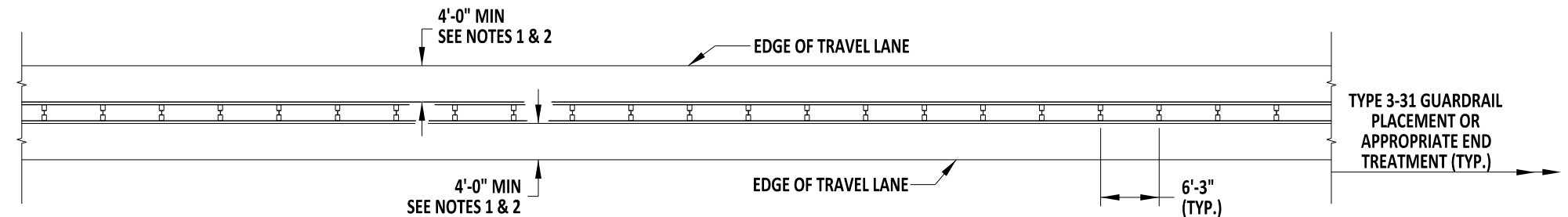
**TYPE 1-31 GUARDRAIL**  
TYPICAL GUARDRAIL TREATMENT WHEN THE REQUIRED 4'-0" CLEARANCE TO THE OBSTRUCTION IS AVAILABLE  
MASH COMPLIANT SYSTEM - FHWA ELIGIBILITY LETTER B-212



**TYPE 2-31 GUARDRAIL**  
TYPICAL GUARDRAIL TREATMENT WHEN 2'-6" TO 4'-0" OF CLEARANCE TO OBSTRUCTION IS AVAILABLE  
NCHRP-350 COMPLIANT SYSTEM UTILIZE CURRENT DETAIL UNTIL FURTHER NOTICE.



FLARE RATES	
DESIGN SPEED	FLARE RATE
70 MPH	15:1
60 MPH	14:1
55 MPH	12:1
50 MPH	11:1
45 MPH	10:1
40 MPH	8:1
30 MPH	7:1



**TYPE 3-31 GUARDRAIL**  
TYPICAL MEDIAN GUARDRAIL TREATMENT  
MASH COMPLIANT SYSTEM - DESIGN BASED ON TTI REPORT 9-1002-12-8

- NOTES:
- 1). MAXIMIZE THE DISTANCE FROM THE EDGE OF THE TRAVEL LANE OR SHOULDER TO THE FACE OF GUARDRAIL. THIS AREA SHALL BE GRADED 10:1 OR FLATTER.
  - 2). GRADE THIS AREA 10:1 OR FLATTER.



ENGINEERING SUPPORT  
*[Signature]*  
RECOMMENDED  
DATE 09/01/2020

TYPES 1-31, 2-31, AND 3-31 GUARDRAIL APPLICATIONS

STANDARD NO. B-1 (2020) SHT. 1 OF 5

REVIEWED

*[Signature]*  
DEPUTY DIRECTOR - DESIGN  
DATE 09/01/2020

APPROVED

*[Signature]*  
CHIEF ENGINEER  
DATE 09/01/2020